



Questions and Answers

Green Strides Webinar Series: Discover Why Good IAQ is Essential for Green and Healthy Schools

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Developing an IAQ Management Program

Q: What advice would you give to cash-strapped school districts to help them get an IAQ program off the ground?

A: First of all, don't expect to get your program off the ground and accomplish everything overnight. You may have to implement your program in stages and aim to complete a quarter or less of your goal every year. Accomplishing your goals may seem insurmountable in the beginning, but making steady progress every day will get you there. Don't give up, even if your goals are years away. However, if you do nothing, you accomplish nothing.

Secondly, educate yourself. There are a multitude of good websites and free publications on IAQ available to everyone. Get your information from reliable websites. Have more trust in those to which you are not financially bound, nor promote the services of consultants or contractors. Government sponsored websites and those sponsored by research organizations, such as the Center for Disease Control (CDC), the American Industrial Hygiene Association (AIHA), the American Conference of Governmental Industrial Hygienists (ACGIH) and the American Society of Heating, Refrigerating and Air Conditioning Engineer, Inc., can provide you with a good knowledge base to judge the validity of other websites. These organizations also offer their own IAQ publications.

In addition, the National Institute of Occupational Safety and Health (NIOSH)'s "[Building Air Quality](#)" December 1991, is available for download at no cost. Although this publication is not directed to school buildings, it is a great IAQ primer and complements the [IAQ Tools for Schools Action Kit](#).

The majority of IAQ complaints can be remedied fairly easily. Most of the time, all that is required is basic knowledge of IAQ, an open mind, good listening skills and a willingness to investigate multiple ideas. Solving IAQ problems is often a process of elimination. Unless your district is in a situation where there is a public uproar over the indoor air quality and trust in the district is gone, there is no reason to call in an outside firm for every IAQ problem. Learning how to respond to IAQ yourself will save countless dollars.

Thirdly, get involved in IAQ discussions. Attending seminars and special learning sessions is a great way to learn and network with others in the IAQ community. Also, get to know people in health departments who work in indoor environment concerns. Most of them are more than willing to help, especially school districts. Establish good working relationships with regulatory personnel and vendors. That way, you'll know who to turn to if a crisis does arise.

Q: What can students do to help develop a culture of healthy indoor air quality?

A: Encourage students to be stewards of their school environment. Integrating IAQ topics into the curriculum can empower and educate students, inform them of actions they can take to create a [healthy indoor environment](#), and help build understanding and support for a school-wide IAQ management program. Check out the Students Web page of the *IAQ Tools for Schools* website for more information: <http://epa.gov/iaq/schools/parents.html>.

Q: To the School District of Omaha Public Schools, besides funding, how can EPA Regional Office staff members help all of our local school districts get to where you are now? With limited time and travel funds, what key things could we do to help move them in a positive direction?

A: Keep active in the IAQ field to keep interest and enthusiasm high. Talk with others who deal with IAQ (and other environmental issues) and discuss previous or current situations, is one of the best ways to learn.

Stay in contact with your EPA representatives so they know your interests and can alert you to upcoming seminars and available publications. Remember, there are other agencies close to you that are often more than willing to help. Local and State Health Departments may host seminars and know the whereabouts of seminars sponsored by other agencies, including EPA. Many EPA sponsored seminars were not in our immediate area, but were within a drivable distance. We heard of those seminars through the *IAQ Tools for Schools* Connector, *IAQ Tools for Schools* [Email Discussion List](#) and health department personnel.

Find local branches of Industrial Hygiene and HVAC related organizations. They bring in speakers on a fairly regular basis. The cost may be minimal, or you may need to become a member to attend.

Another source of training is your vendors. Many vendors will bring in speakers to train their staff and may invite clients to attend. If possible, find out who the speaker is beforehand and research his/her background so you can prepare questions in advance.

Q: Is there a limit to the number of IAQ Tools for Schools Action Kits that you can receive?

A: One Action Kit per school usually suffices. Check out the newly updated *IAQ Tools for Schools* website, which now includes an interactive Action Kit:

<http://www.epa.gov/iaq/schools/actionkit.html>. All of the checklists and backgrounders are available for download on the website. The information in the Action Kit is also provided on CD and these can be copied easily and inexpensively (no copyright). To get more information on ordering, visit http://www.epa.gov/iaq/schools/actionkit_text.html#Order.

Indoor Pollutants

Q: What is the impact of outdoor pollution on IAQ?

A: Indoor air originates from outdoors and is certainly influenced by outdoor air pollutants. To help determine the local air quality, contact your National Emissions Standard and Hazardous Air Pollutant (NESHAP) office. This is a federal branch, but often gives a local agency power to work on its behalf. They can help you determine if the ambient air standards have been violated.

If the offending pollutant is of a chemical nature, you may be able to insert specialized filter media in line to capture the molecules of the offending chemical. For example, a local filter supplier may be able to make filters of activated charcoal to remove some offensive odors (industrial related). Always remember to include HVAC technicians before the air flow is altered as those filters may add to the mechanical burden of the system.

If your concern is particulate in nature, you may be able to replace the existing filters with ones with a higher Minimum Efficiency Reporting Value (MERV) rating. Basically, the higher the MERV rating, the smaller the particulate it is designed to capture.

Q: Have schools identified dry erase markers as an IAQ problem?

A: For several years, we were able to keep dry erase markers out of the classroom and kept the traditional chalk boards. Unfortunately, that practice was overridden by the high demand for these markers as several persons stated they were allergic to chalk dust and requested dry erase boards. One by one, chalk dust was replaced by volatile organic compound (VOC) emitting markers. Fortunately, the district purchasing department understood the concern of inserting these products into the classroom and sought to find low VOC, low toxic markers. Currently, we are field testing a low VOC, low toxic marker that cleaned with water.

Q: Where do polychlorinated biphenyls (PCBs) in lighting fixtures in older schools reside in the spectrum of hazards related to IAQ?

A: Schools need to control Polychlorinated Biphenyls (PCB) exposures, and can do so by identifying PCB materials and sources. Sampling of PCBs is not part of a routine walkthrough, but it is similar to sampling for asbestos, lead, radon, mercury and other environment hazards in schools.

An in-depth investigation in a high school found PCBs in numerous materials, including but not limited to, laminate adhesive, mastics, paint, gasket, carpet, foam padding and bulk dust (TRC, 2008; Sullivan, 2008; TRC, 2009).

According to the EPA's National Exposure Research Laboratory Office of Research and Development, there has currently been no systematic effort to characterize PCB sources and environmental levels at schools across the U.S. In response, EPA has developed a research plan to measure PCBs in schools. At each school, PCBs will be measured in indoor and outdoor air, soil adjacent to the building, and on surfaces or in dust at multiple locations within the school building. Caulk and other materials that may be primary or secondary PCB sources will be collected for PCB analysis. Sample collection will focus on locations where students are most likely to spend time, including classrooms, libraries, multipurpose rooms, gymnasiums, cafeterias, hallways and the outdoors. For more information contact EPA, and check out "[A Research Study To Investigate PCBs in School Buildings, Final Research Plan](#)," June 16, 2010, EPA/600/R-10/074 June 2010.